

Attorney's Docket No.: ALT.P022 (A980)

PATENT

DECLARATION FOR PATENT APPLICATION

As below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below, next to my name.

I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**METHOD AND APPARATUS FOR PERFORMING INCREMENTAL PLACEMENT FOR LAYOUT-DRIVEN OPTIMIZATIONS ON FIELD PROGRAMMABLE GATE ARRAYS**

the specification of which

  X   is attached hereto.  
was filed on July 11, 2003 as  
United States Application Number 10/617,502  
or PCT International Application Number \_\_\_\_\_  
and was amended on \_\_\_\_\_  
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above.

I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, and that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed:

| <u>Prior Foreign Application(s)</u> |                    |                                 | <u>Priority Claimed</u> |               |
|-------------------------------------|--------------------|---------------------------------|-------------------------|---------------|
| _____<br>(Number)                   | _____<br>(Country) | _____<br>(Day/Month/Year Filed) | <u>  Yes  </u>          | <u>  No  </u> |
| _____<br>(Number)                   | _____<br>(Country) | _____<br>(Day/Month/Year Filed) | <u>  Yes  </u>          | <u>  No  </u> |
| _____<br>(Number)                   | _____<br>(Country) | _____<br>(Day/Month/Year Filed) | <u>  Yes  </u>          | <u>  No  </u> |

I hereby claim the benefit under title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below

\_\_\_\_\_  
(Application Number)

\_\_\_\_\_  
Filing Date

\_\_\_\_\_  
(Application Number)

\_\_\_\_\_  
Filing Date

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT International application designating the United states of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

\_\_\_\_\_  
(U.S. Parent Application or  
PCT Parent No.)

\_\_\_\_\_  
Parent Filing Date

\_\_\_\_\_  
(Status -- patented,  
pending, abandoned)

\_\_\_\_\_  
Parent Patent No.  
(if applicable)

\_\_\_\_\_  
(U.S. Parent Application or  
PCT Parent No.)

\_\_\_\_\_  
Parent Filing Date

\_\_\_\_\_  
(Status -- patented,  
pending, abandoned)

\_\_\_\_\_  
Parent Patent No.  
(if applicable)

Address all correspondence to and direct all telephone calls to Lawrence M. Cho, P.O. Box 2144, Champaign, IL 61825, telephone (217) 377-2500.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First/Joint Inventor Deshanand P. Singh

Inventor's Signature

Desh Singh

Date

Oct 29, 2003

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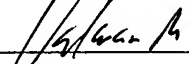
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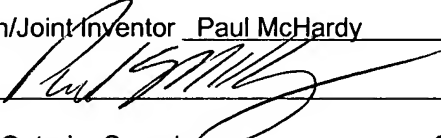
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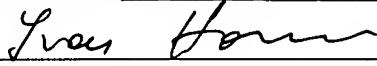
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Full Name of Eighth/Joint Inventor Ivan Hamer

Inventor's Signature  Date Oct 29 /03

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Full Name of Ninth/Joint Inventor Stephen D. Brown

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Title 37, Code of Federal Regulations, Section 1.56  
Duty to Disclose Information Material to Patentability

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) Prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made or record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

**ASSIGNMENT**

In consideration of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **Deshanand P. Singh, Chris Sanford, Gabriel Quan, Terry P. Borer, Ian Chesal, Valavan Manohararajah, Paul McHardy Ivan Hamer, and Stephen D. Brown** the undersigned Assignor(s), believing to be the original, first and sole or joint inventor(s) of any and all new and useful improvements disclosed in the application for the United States patent entitled **METHOD AND APPARATUS FOR PERFORMING INCREMENTAL PLACEMENT FOR LAYOUT-DRIVEN OPTIMIZATIONS ON FIELD PROGRAMMABLE GATE ARRAYS** hereby sell, assign, and transfer to **Altera Corporation** a Delaware corporation, having a principal place of business at 101 Innovation Drive San Jose, CA 95134, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the same patent application which has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below.

The undersigned further sell, assign, and transfer to Assignee said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application; and the right to file foreign applications directly in the name of the Assignee and to claim for any such foreign applications any priority rights to which such applications are entitled under international conventions, treaties or otherwise.



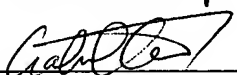

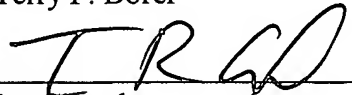
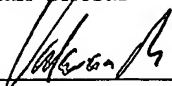
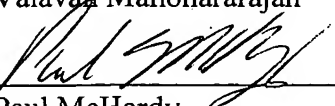
The undersigned further agree that said Assignee may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives.

The undersigned covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

The undersigned hereby authorize and request the Officials of the United States Patent and Trademark Office and any and all foreign Patent Offices to issue any and all Letters Patents, when granted, to said Assignee as the assignee of the entire right, title and interest in and to the same, for the sole use of said Assignee, its successors and assigns, to the full end of the term for which said Letters Patents may be granted.

The undersigned hereby grant to Lawrence M. Cho, Attorney for Applicant, located at P.O. Box 2144 Champaign, IL, 61825, the power to insert on this document any further identification necessary or desirable to comply with the rules of the United States Patent and Trademark Office for recordation of this Assignment.

Each Inventor/Assignor: Please Sign and Date Below:

|                                       |   |
|---------------------------------------|---|
| <u>Oct 29</u> , 20 <u>03</u><br>Date  | <u></u><br>Deshanand P. Singh    |
| <u>Oct 29</u> , 20 <u>03</u><br>Date  | <u></u><br>Chris Sanford         |
| <u>Oct 29</u> , 20 <u>03</u><br>Date  | <u></u><br>Gabriel Quan          |
| <u>Oct 29</u> , 20 <u>03</u><br>Date  | <u></u><br>Terry P. Borel        |
| <u>Oct. 29</u> , 20 <u>03</u><br>Date | <u></u><br>Ian Chesal            |
| <u>Oct 29</u> , 20 <u>03</u><br>Date  | <u></u><br>Valavan Manohararajah |
| <u>Oct. 29</u> , 20 <u>03</u><br>Date | <u></u><br>Paul McHardy          |

Please also list date you signed the accompanying DECLARATION if Assignment is executed with a new filing:

|                                       |
|---------------------------------------|
| <u>Oct 29</u> , 20 <u>03</u><br>Date  |
| <u>Oct 29</u> , 20 <u>03</u><br>Date  |
| <u>Oct 29</u> , 20 <u>03</u><br>Date  |
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| <u>Oct. 29</u> , 20 <u>03</u><br>Date |

|                              |                         |
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| <u>Oct 28</u> , 20 <u>03</u> | <u>Ivan Hamer</u>       |
| Date                         | Ivan Hamer              |
| <u>Oct 29</u> , 20 <u>03</u> | <u>Stephen D. Brown</u> |
| Date                         | Stephen D. Brown        |

|                              |
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| <u>Oct 28</u> , 20 <u>03</u> |
| Date                         |
| <u>Oct 29</u> , 20 <u>03</u> |
| Date                         |





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: DESHANAND P. SINGH

Filed: July 11, 2003

For: METHOD AND APPARATUS FOR PERFORMING INCREMENTAL  
PLACEMENT FOR LAYOUT-DRIVEN OPTIMIZATIONS ON FIELD  
PROGRAMMABLE GATE ARRAYS

Serial No.: 10/617,502

Group Art Unit: UNKNOWN

Examiner: UNKNOWN

Atty Dkt: ALT.P022 (A980)

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313

**STATEMENT UNDER 37 C.F.R. §3.73(b),  
ELECTION UNDER 37 C.F.R. §3.71, and  
POWER OF ATTORNEY**

Sir:

This document provides a Statement under §3.73 by the Assignee, an Election by the Assignee under §3.71 to prosecute at the exclusion of the inventor(s), and a Power of Attorney from the Assignee.

Statement Under §3.73(b)

The undersigned states that it is the Assignee of the entire right, title and interest in the Patent application identified above by virtue of either:

A. ☒ An Assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_ The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_ The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_ The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (*i.e.*, the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the assignee.

Election under §3.71

The Assignee hereby elects under 37 C.F.R. §3.71 to prosecute the application to the exclusion of the inventor(s).

Power of Attorney

The Assignee revokes any previous Powers of Attorney and appoints Derek E. Minihane, Reg. No. 39,774, Henry Ohab, Reg. No. 45,854, Archana Ojha, Reg. No. 53,408, and Lawrence M. Cho, Reg. No. 39,942, its attorneys, with full power of substitution and revocation, to prosecute the application and any divisions, continuations in whole or in part, renewals and reissues of the same, to make alterations and amendments therein, to transact all business in the Patent and Trademark Office in connection therewith, and to receive any Letters Patent, and for one year after issuance of such Letters Patent to file any request for a certificate of correction that may be deemed appropriate.

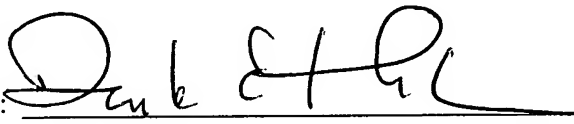
Future Communications

Please direct all communications as follows:

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Champaign, IL 61825  
(217) 377-2500

ASSIGNEE:

ALTERA CORPORATION

By:   
(Signature)

Name: Derek E. Minihane

Date: 11/4/03

Title: Director, Intellectual Property Law and Assistant Secretary